WHAT IS CLAIMED IS:

1. An image recording device comprising:

a recording head having light sources of plural channels arranged rectilinearly, and able to simultaneously illuminate light beams from the respective channels on the basis of input image data, and able to main scan and subscan the light beams onto a recording material in order to record an image;

a line memory storing the input image data, with image data based on a number of main scan lines of one main scan by the recording head being one unit;

a buffer storing, for each of the respective channels, the input image data stored in the line memory;

a transfer control device shifting, in a main scanning direction, image data read out from the line memory and transferring the image data to the buffer, on the basis of pixel offset amounts in the main scanning direction between the respective main scan lines; and

an image data reshuffling control device reshuffling, in units of channels and on the basis of an order of the respective channels of the recording head, image data to be transferred to the buffer from the line memory.

2. The image recording device of claim 1, wherein the transfer control device carries out transfer from the line memory to the

buffer by burst transfer in which the image data is successively transferred in units of a predetermined amount of image data, and can, on the basis of the pixel offset amounts and a burst transfer amount, selectively execute at least one of address shifting and pixel shifting.

3. The image recording device of claim 2, wherein the plural channels arranged rectilinearly are arranged in two or more rows.

4. The image recording device of claim 2, wherein the image data reshuffling control device has a look-up table in which reshuffle destinations of the respective channels are set in advance in accordance with image recording specifications which are any of resolution, a number of channels to be substantially used, presence/absence of interlacing, subscanning direction, and a combination of two or more thereof.

5. The image recording device of claim 3, wherein the image data reshuffling control device has a look-up table in which reshuffle destinations of the respective channels are set in advance in accordance with an order of the channels which physically changes in accordance with movement of the recording head for changing a scan line pitch.

6. The image recording device of claim 3, wherein lines drawn by

a row of the channels arranged rectilinearly do not overlap in the main scanning direction.

7. The image recording device of claim 6, further comprising a prohibiting device which, when image data is not stored at channels stored in the buffer, prohibits illumination of light beams as channels which are not substantially used.

8. An image recording device comprising:

a recording head having light sources of plural channels arranged rectilinearly, and able to simultaneously illuminate light beams from the respective channels on the basis of input image data, and able to main scan and subscan the light beams onto a recording material in order to record an image;

a line memory storing the input image data, with image data based on a number of main scan lines of one main scan by the recording head being one unit;

a buffer storing, for each of the respective channels, the input image data stored in the line memory; and

an image data reshuffling control device which, on the basis of an order of the respective channels of the recording head, reshuffles image data in units of the channels from the line memory to the buffer.

9. The image recording device of claim 8, wherein the plural

channels arranged rectilinearly are arranged in two or more rows.

10. The image recording device of claim 9, wherein lines drawn by a group of the channels arranged rectilinearly do not overlap in the main scanning direction.

11. The image recording device of claim 9, wherein the image data reshuffling control device has a look-up table in which reshuffle destinations of the respective channels are set in advance in accordance with image recording specifications which are any of resolution, a number of channels to be substantially used, presence/absence of interlacing, subscanning direction, and a combination of two or more thereof.

12. The image recording device of claim 10, wherein the image data reshuffling control device has a look-up table in which reshuffle destinations of the respective channels are set in advance in accordance with an order of the channels which physically changes in accordance with movement of the recording head for changing a scan line pitch.

13. The image recording device of claim 11, further comprising a prohibiting device which, when image data is not stored at channels stored in the buffer, prohibits illumination of light beams as channels which are not substantially used.

14. An image recording method using an image recording device having: (a) a recording head having light sources of plural channels arranged rectilinearly, and able to simultaneously illuminate light beams from the respective channels on the basis of input image data, and able to main scan and subscan the light beams onto a recording material in order to record an image; (b) a line memory storing the input image data, with image data based on a number of main scan lines of one main scan by the recording head being one unit; and (c) a buffer storing, for each of the respective channels, the input image data stored in the line memory,

said method comprising the steps of:

on the basis of pixel offset amounts in a main scanning direction between the respective main scan lines, shifting, in the main scanning direction, image data read out from the line memory and transferring the image data to the buffer; and

reshuffling, in units of channels and on the basis of an order of the respective channels of the recording head, image data to be transferred to the buffer from the line memory.

15. The method of claim 14, wherein the step of transferring to the buffer includes steps of carrying out transfer from the line memory to the buffer by burst transfer in which the image data is successively transferred in units of a predetermined amount

of image data, and, on the basis of the pixel offset amounts and a burst transfer amount, selectively executing at least one of address shifting and pixel shifting.

16. The method of claim 14, wherein the step of reshuffling in units of channels includes a step of setting reshuffle destinations of the respective channels in advance in accordance with an order of the channels which physically changes in accordance with movement of the recording head for changing a scan line pitch.

17. The method of claim 14, wherein the step of reshuffling in units of channels includes a step of setting reshuffle destinations of the respective channels in advance in accordance with image recording specifications which are any of resolution, a number of channels to be substantially used, presence/absence of interlacing, subscanning direction, and a combination of two or more thereof.

18. The method of claim 14, further comprising a step of prohibiting illumination of light beams as channels which are not substantially used, when image data is not stored at channels stored in the buffer.

19. The method of claim 14, wherein the step of reshuffling in

units of channels includes a step of processing the image data in units of the channels from the line memory to the buffer.

20. The method of claim 17, further comprising a step of drawing lines by the channels arranged rectilinearly, without the lines overlapping in the main scanning direction.